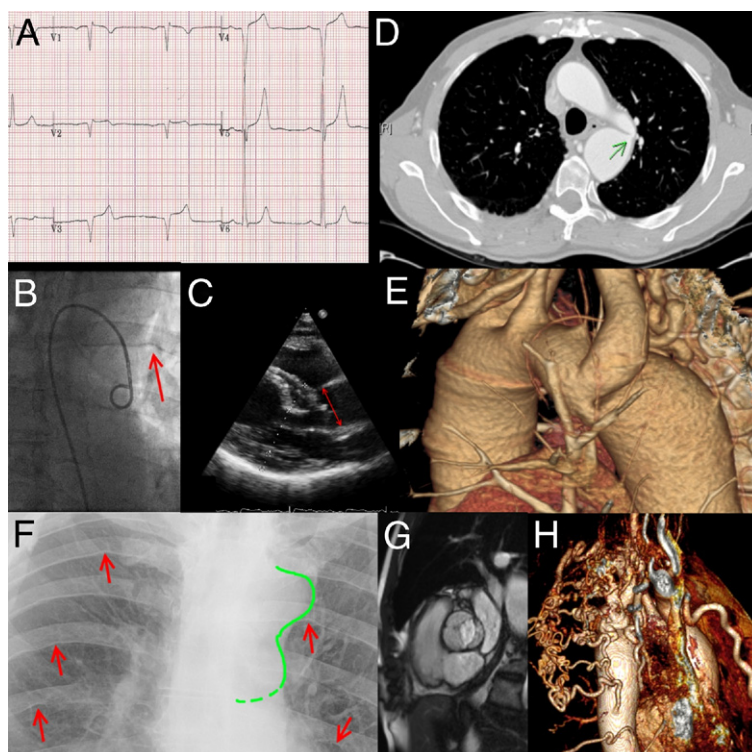


IMAGES IN CARDIOLOGY

Aortic Coarctation Presenting as Pseudoinfarction

Manish Motwani, MB ChB (HONS),* Sanjay Arya, MBBS (HONS),* Choong Poon, MB ChB,†
Matthias Schmitt, MD, PhD‡

Wigan and Manchester, United Kingdom



From the *Department of Cardiology, Royal Albert Edward Infirmary, Wigan, United Kingdom; †Department of Radiology, Royal Albert Edward Infirmary, Wigan, United Kingdom; and the ‡Cardiac MRI Unit, Wythenshawe Hospital, Manchester, United Kingdom.
Manuscript received May 5, 2010; accepted May 12, 2010.

A 63-year-old man presented with a history of vasovagal syncope. Surprisingly, his troponin-T level was elevated (0.4 ng/ml), and his electrocardiogram revealed an anteroseptal myocardial infarction pattern (A). Femoral route coronary angiography was attempted, but catheters would not advance up the aortic arch, and fluoroscopy revealed rib notching (Rossler's sign, red arrow) (B, [Online Video 1](#)). Radial route angiography successfully excluded any significant coronary disease. A suspicion of aortic coarctation was raised, and transthoracic echocardiography demonstrated severe left ventricular hypertrophy and a dilated proximal aorta (C, red arrow; [Online Videos 2 and 3](#)). A computed tomography scan delineated a severe aortic coarctation (D, E, green arrow). Cardiac magnetic resonance imaging revealed an associated functionally bicuspid aortic valve (G, [Online Video 4](#)) and an extensive meshwork of collaterals causing the rib notching (red arrows in F), as seen in a 3-dimensional volume-rendered magnetic resonance image (H). Retrospective examination of his chest radiograph also demonstrated a classical “mediastinal 3” sign (green line) due to ascending aortic dilation and post-stenotic dilation (F). Late-adult presentation of coarctation is unusual and more typically presents with hypertension or cardiac failure, but our patient was well and normotensive. The diagnosis here, serendipitous and made by femoral route cardiac catheterization, was made by virtue of an abnormal electrocardiogram and raised troponin level, namely, pseudoinfarction. Pseudoinfarction is commonly seen in cases of hypertrophic cardiomyopathy or aortic stenosis, but aortic coarctation with left ventricular hypertrophy is also a differential.